

FIG. 1  
*PRIOR ART*

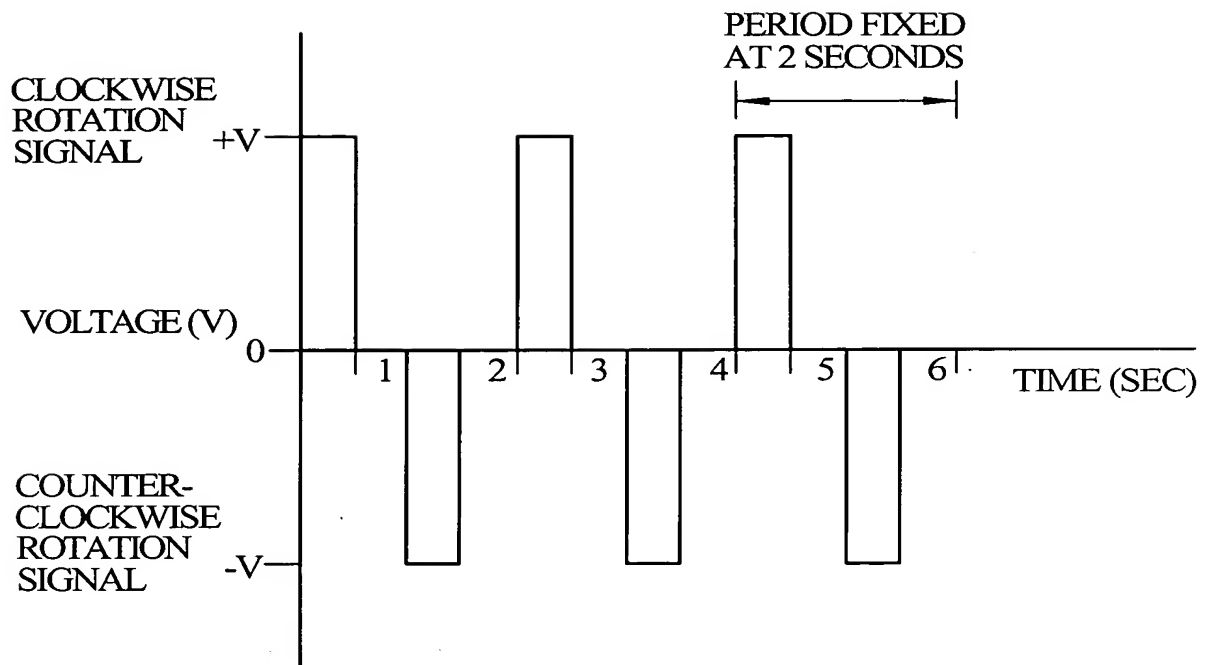


FIG. 2

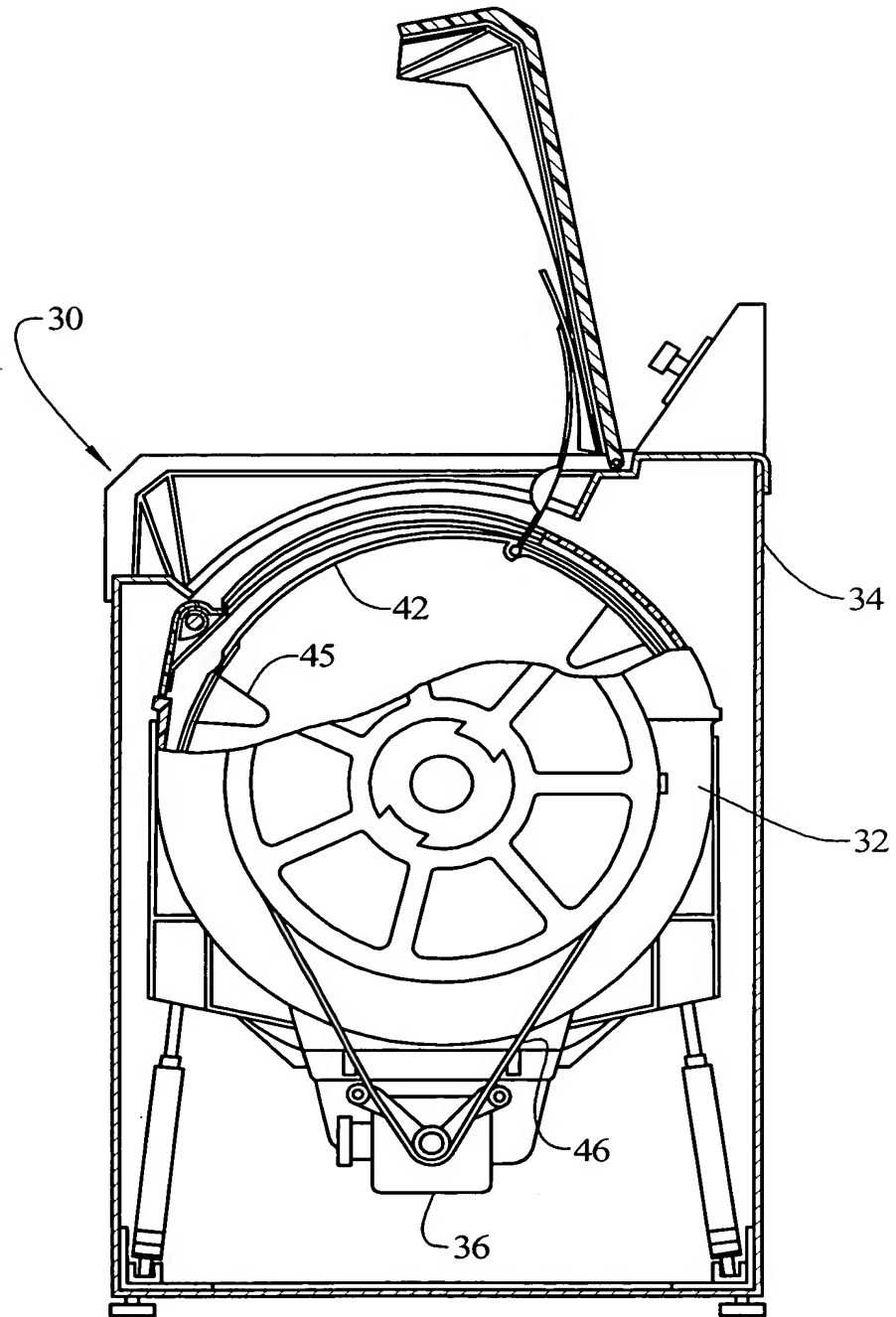


FIG. 3

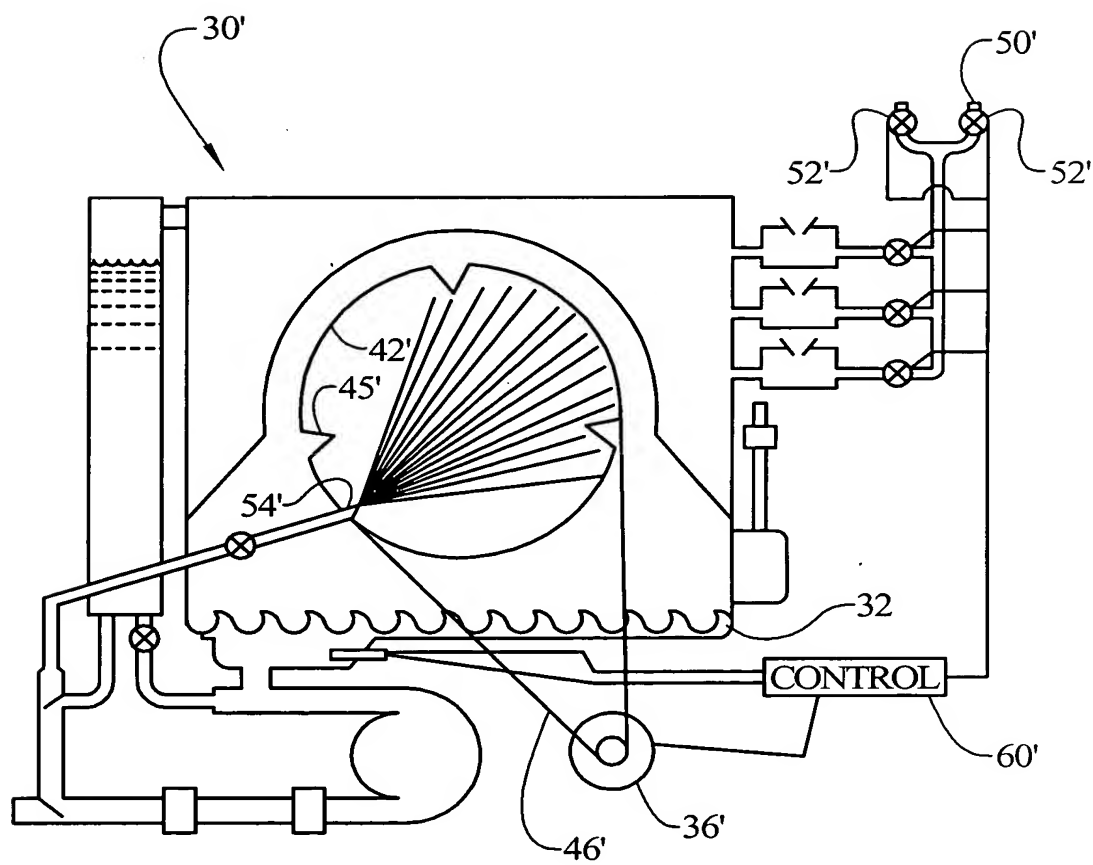


FIG. 4

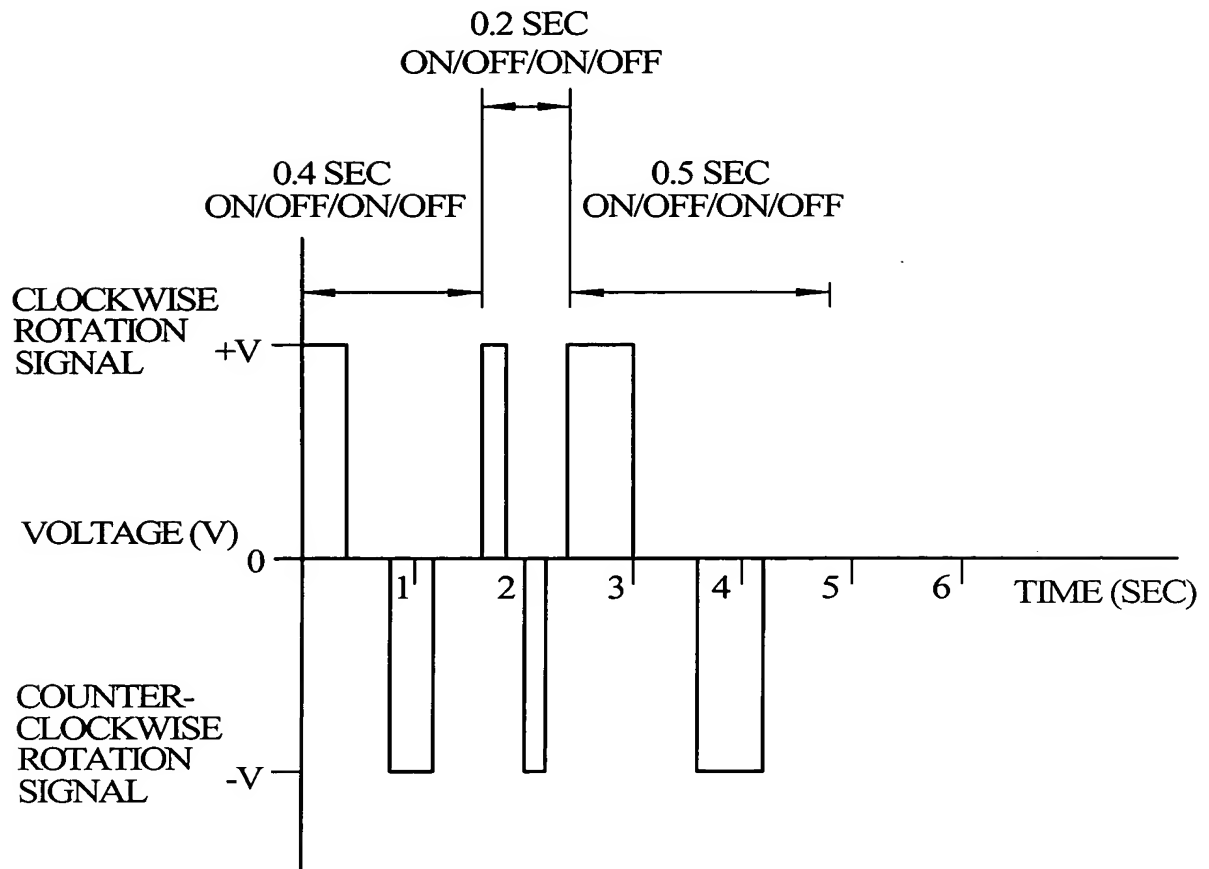


FIG. 5

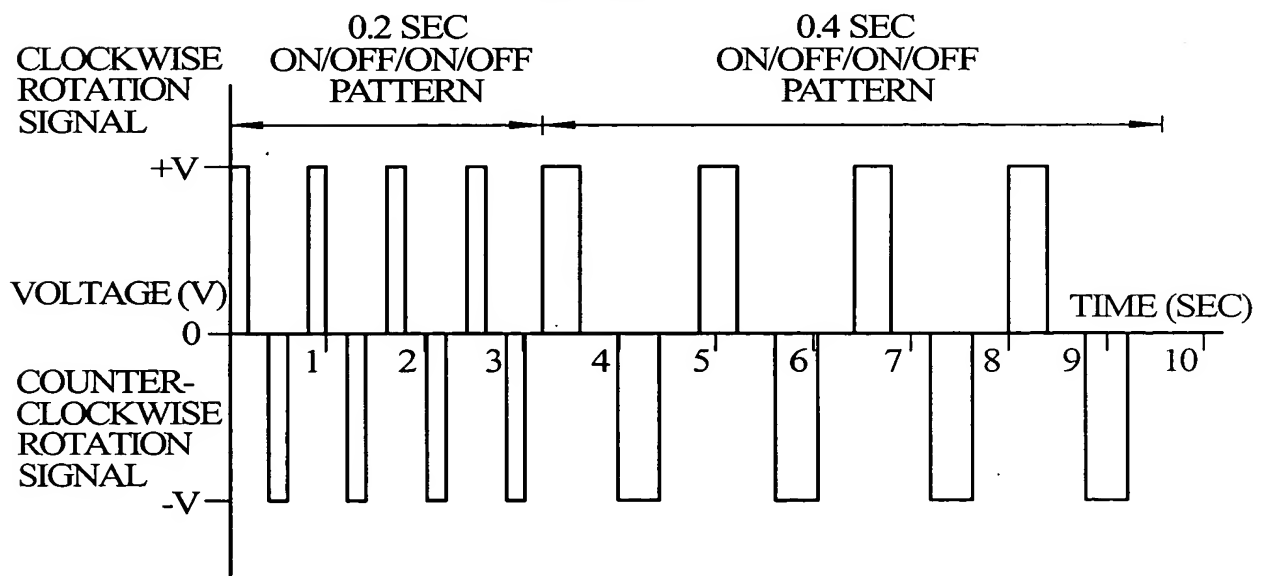


FIG. 6

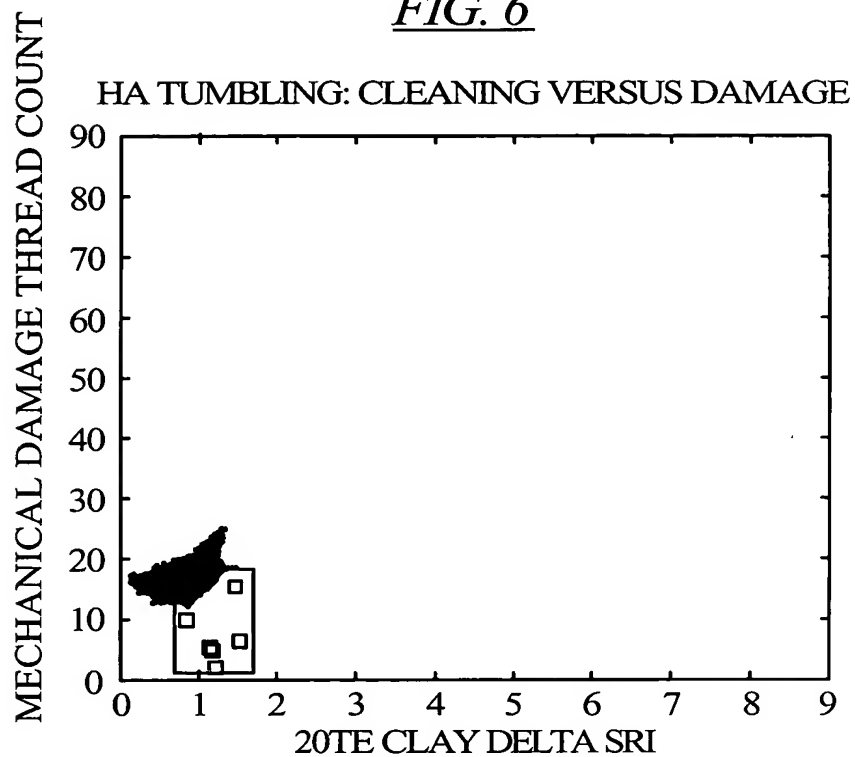


FIG. 7

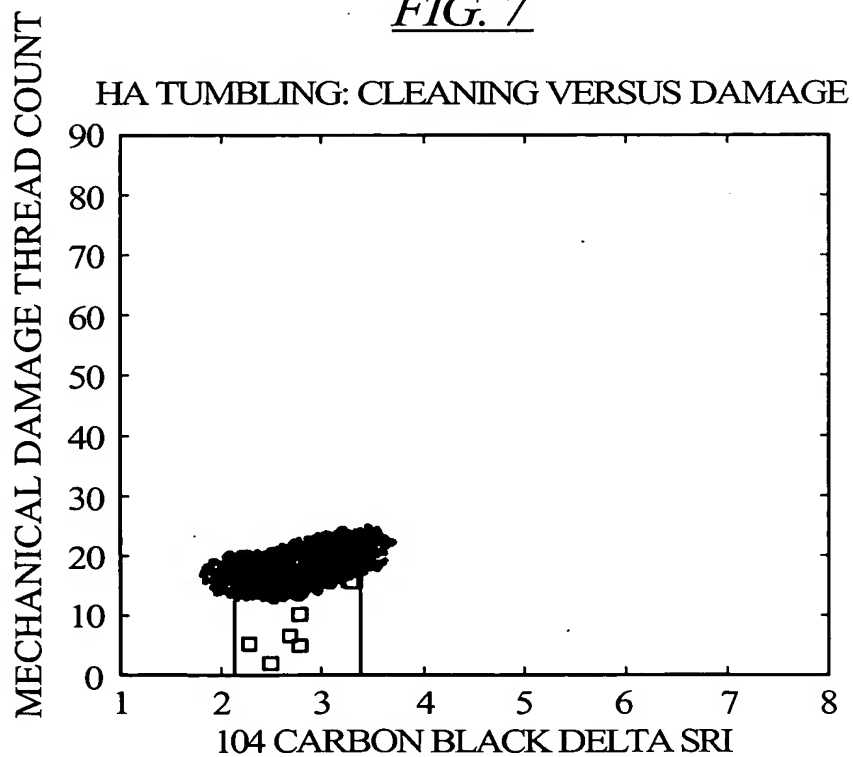


FIG. 8

	CCW	CW
RPM MEAN (RPM)	70	70
RPM RANGE (RPM)	+/- 20	+/- 20
TORQUE (NM)	39	39
ON TIME (SEC)	0.3 - 0.5	0.3 - 0.5
OFF TIME (SEC)	0 - 0.3	0 - 0.3

FIG. 9

	CCW	CW
RPM MEAN (RPM)	70	90
RPM RANGE (RPM)	+/- 10	+/- 20
TORQUE (NM)	39	44
ON TIME (SEC)	0.3 - 0.5	0.3 - 0.5
OFF TIME (SEC)	0.05	0 - 0.3

FIG. 10

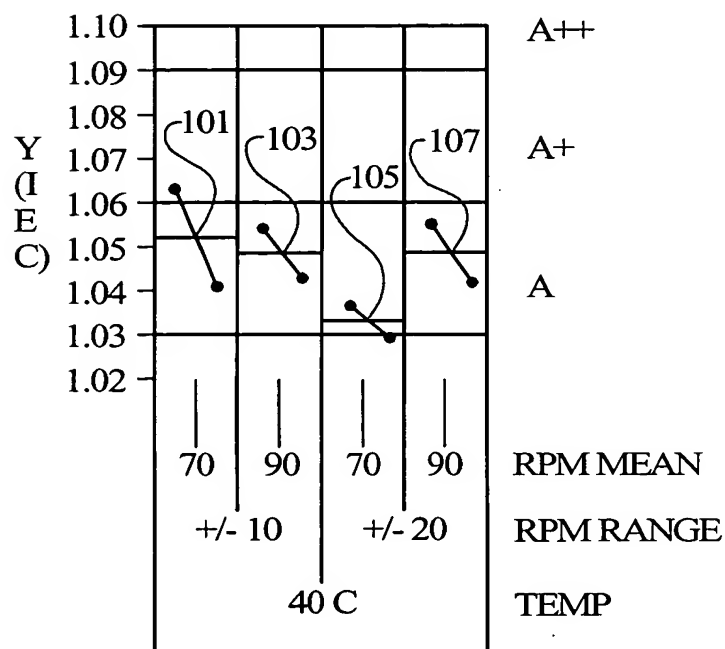


FIG. 11

	CW RPM (RPM)	CCW RPM (RPM)	CW ON TIME (SECONDS)	CW OFF TIME (SECONDS)	CCW ON TIME (SECONDS)	CCW OFF TIME (SECONDS)
FULL RANDOM A	50 - 90	50 - 90	0.135 - 2.0	0.135 - 2.0	0.135 - 2.0	0.135 - 2.0
FULL RANDOM B	30 - 75	30 - 75	0.135 - 1.0	0.135 - 1.0	0.135 - 1.0	0.135 - 1.0

	CW RPM (RPM)	CCW RPM (RPM)	CW DEG SWING (DEGREES)	CW OFF TIME (SECONDS)	CCW DEG SWING (DEGREES)	CCW OFF TIME (SECONDS)
DEGREE RANDOM A	30 - 100	30 - 100	180	0.1 - 1.0	180	0.1 - 1.0
DEGREE RANDOM B	20 - 60	20 - 60	240	0.135 - 1.0	240	0.135 - 1.0

	CW RPM (RPM)	CCW RPM (RPM)	RPM CHANGE (SECONDS)	CW DEG SWING (DEGREES)	CW OFF TIME (SECONDS)	CCW DEG SWING (DEGREES)	CCW OFF TIME (SECONDS)
RATCHET RANDOM	50 +/- 30	50 +/- 30	0.3	360	0.5	360	0.5